

Fig. 1

0045665-10099

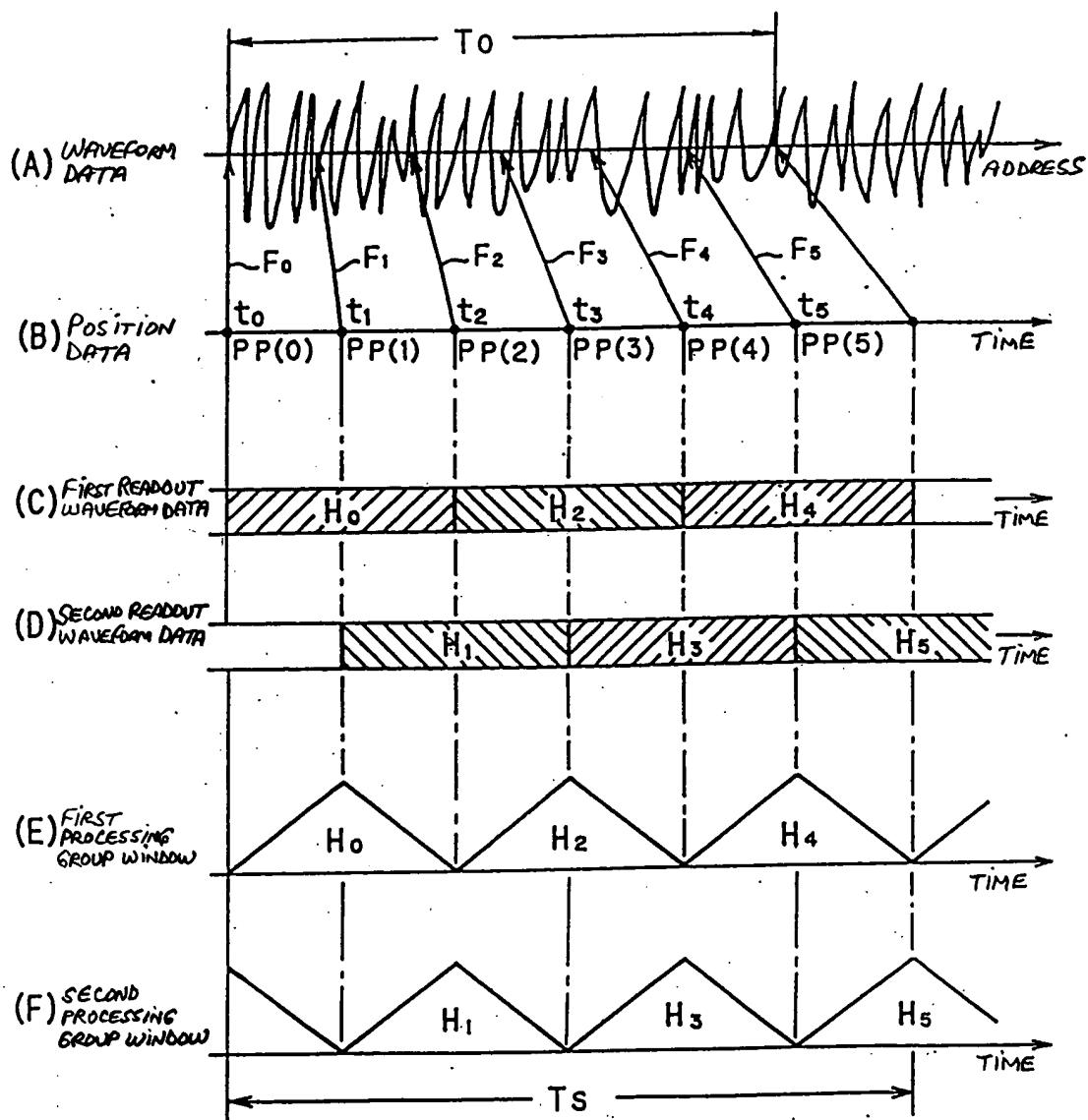


Fig. 2

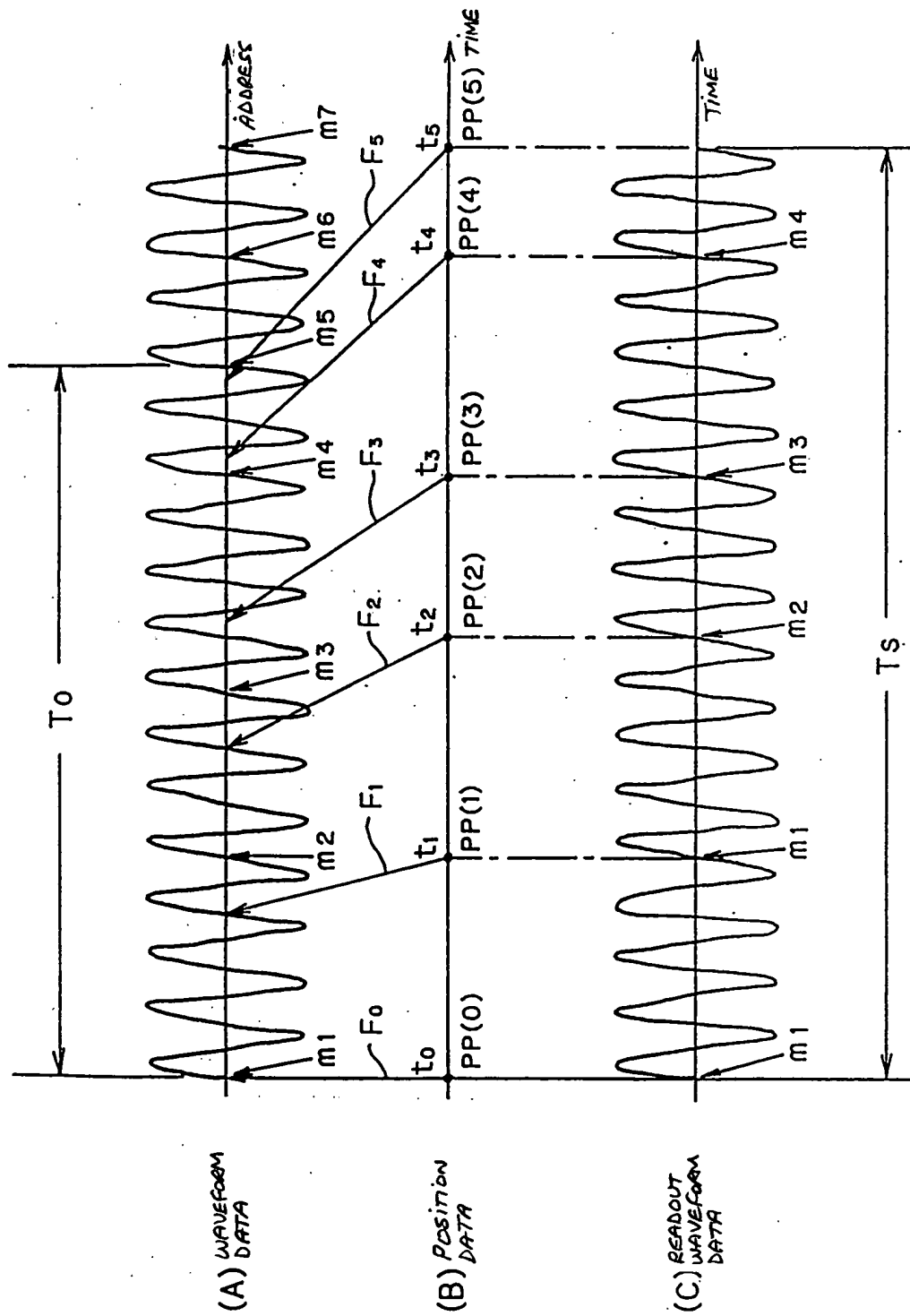


Fig. 3

SECRET

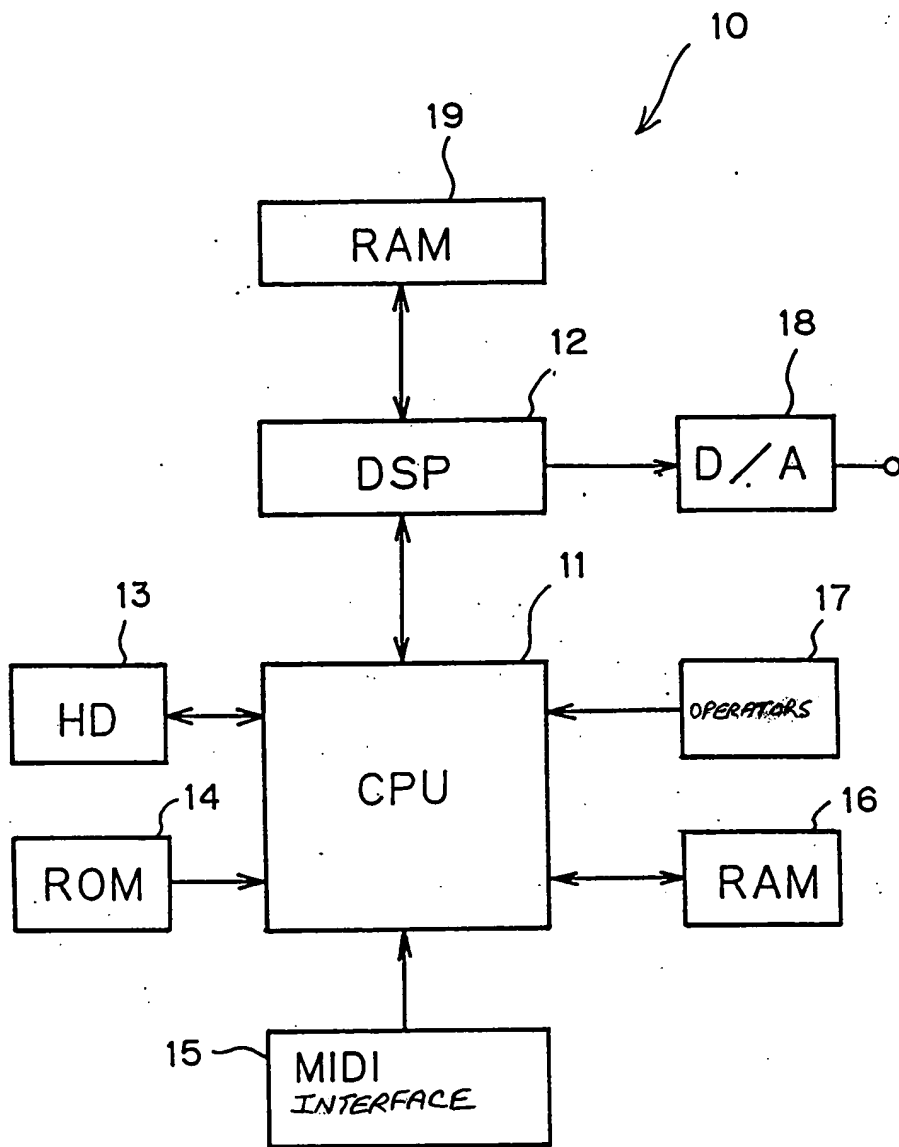
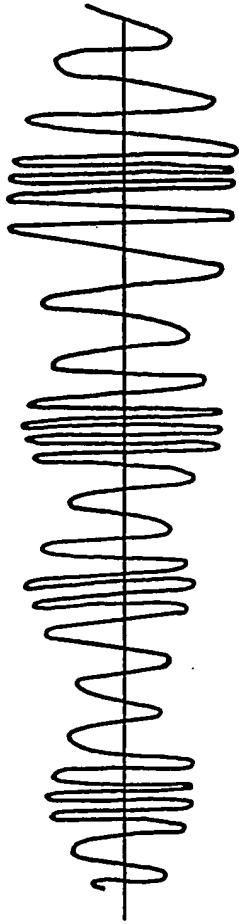


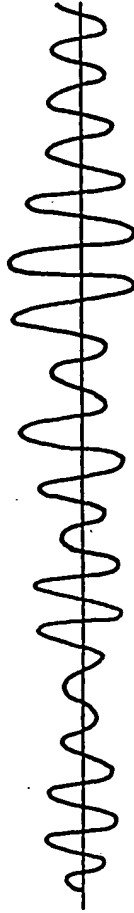
Fig. 4



(A) ORIGINAL
WAVEFORM



(B) FIRST BAND
DIVIDED
WAVEFORM



(C) SECOND BAND
DIVIDED
WAVEFORM



(D) THIRD BAND
DIVIDED
WAVEFORM

Fig. 5

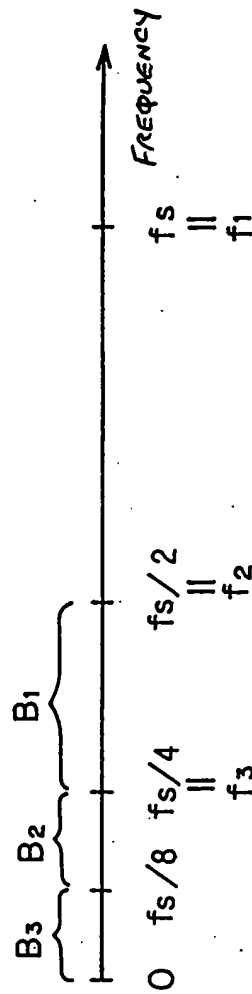


Fig. 6

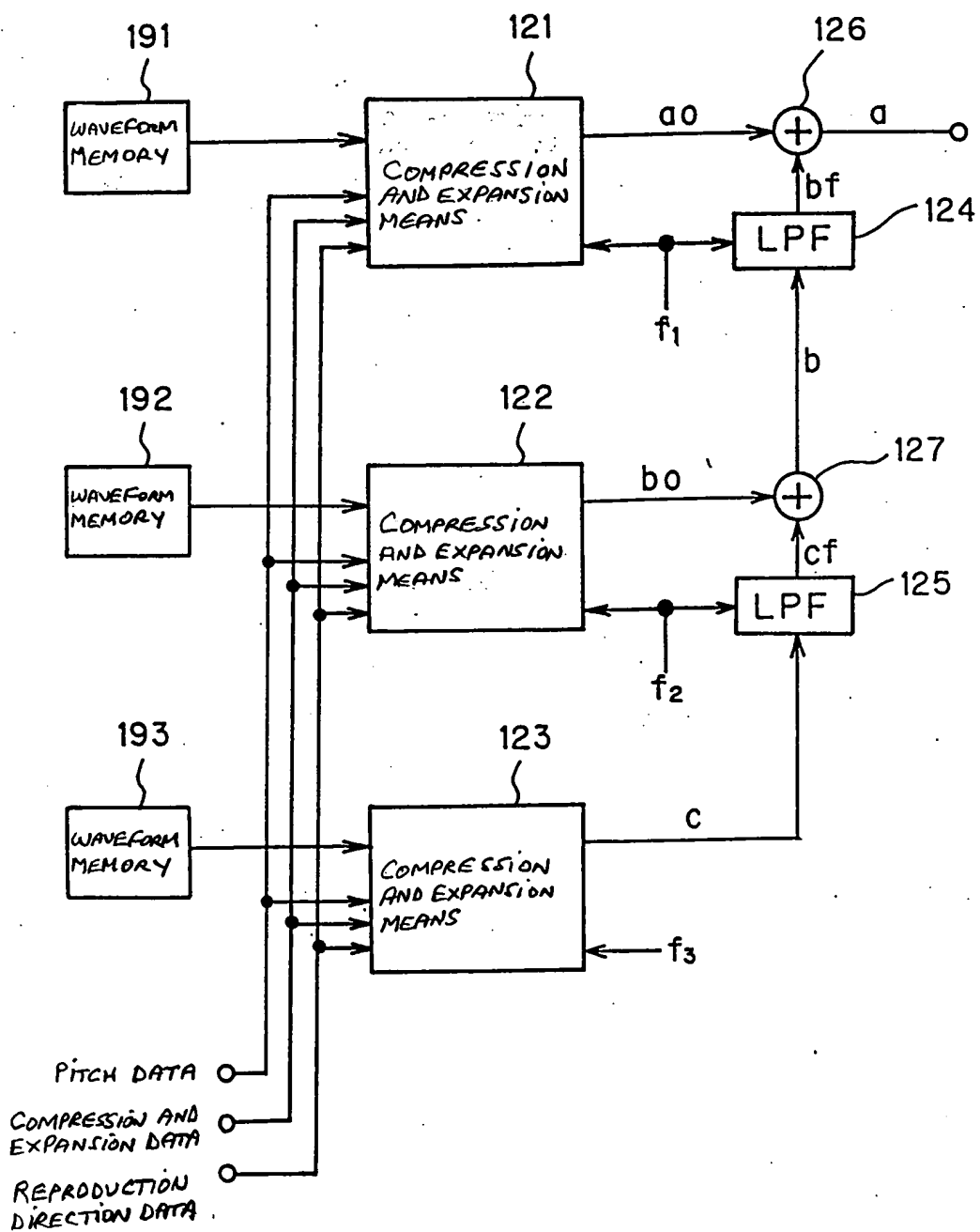


Fig. 7

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graph TD
    S101([START]) --> S102[INPUT OF PITCH DATA P AND COMPRESSION AND EXPANSION DATA TR]
    S102 --> S103{IS N A MULTIPLE OF 4?}
    S103 -- N --> S104[c ← 0]
    S103 -- Y --> S105[THE THIRD COMPRESSION AND EXPANSION PROCESSING IS EXECUTED AND THE OUTPUT C IS OBTAINED]
    S104 --> S105
    S105 --> S106{IS N A MULTIPLE OF 2?}
    S106 -- N --> S109[b ← 0]
    S106 -- Y --> S107[FILTER PROCESSING IS EXECUTED WITH C AND THE OUTPUT CF IS CALCULATED]
    S107 --> S108[THE THIRD COMPRESSION AND EXPANSION PROCESSING IS EXECUTED AND THE OUTPUT b0 IS OBTAINED]
    S108 --> S110[b ← b0 + cf]
    S109 --> S110
    S110 --> S111[FILTER PROCESSING IS EXECUTED WITH b AND THE OUTPUT bf IS CALCULATED]
    S111 --> S112[THE SECOND COMPRESSION AND EXPANSION PROCESSING IS EXECUTED AND THE OUTPUT a0 IS OBTAINED]
    S112 --> S113[a ← a0 + bf]
    S113 --> S114[Q IS THE OUTPUT]
    S114 --> S115{N ≥ 3?}
    S115 -- N --> S116[N ← N + 1]
    S115 -- Y --> S115a[N ← 0]
    S116 --> S115a
    S115a --> S117([END])

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Fig. 8.

Figure 1 illustrates the process of windowing a seismic waveform. The diagram consists of five vertically stacked panels, (A) through (E), sharing a common horizontal time axis.

- (A) ORIGINAL WAVEFORM:** Shows a continuous seismic trace with three distinct pulse regions labeled P_1 , P_2 , and P_3 .
- (B) WINDOW:** Shows three rectangular pulses labeled W_1 , W_2 , and W_3 , each corresponding to one of the pulse regions. The time axis is marked with points a_{01} , a_{02} , a_{11} , a_{12} , a_{21} , and a_{22} .
- (C) FIRST WAVEFORM DATA:** Shows the first windowed segment of the waveform, corresponding to P_1 . The horizontal axis is labeled ADDRESS.
- (D) SECOND WAVEFORM DATA:** Shows the second windowed segment of the waveform, corresponding to P_2 . The horizontal axis is labeled ADDRESS.
- (E) THIRD WAVEFORM DATA:** Shows the third windowed segment of the waveform, corresponding to P_3 . The horizontal axis is labeled ADDRESS.



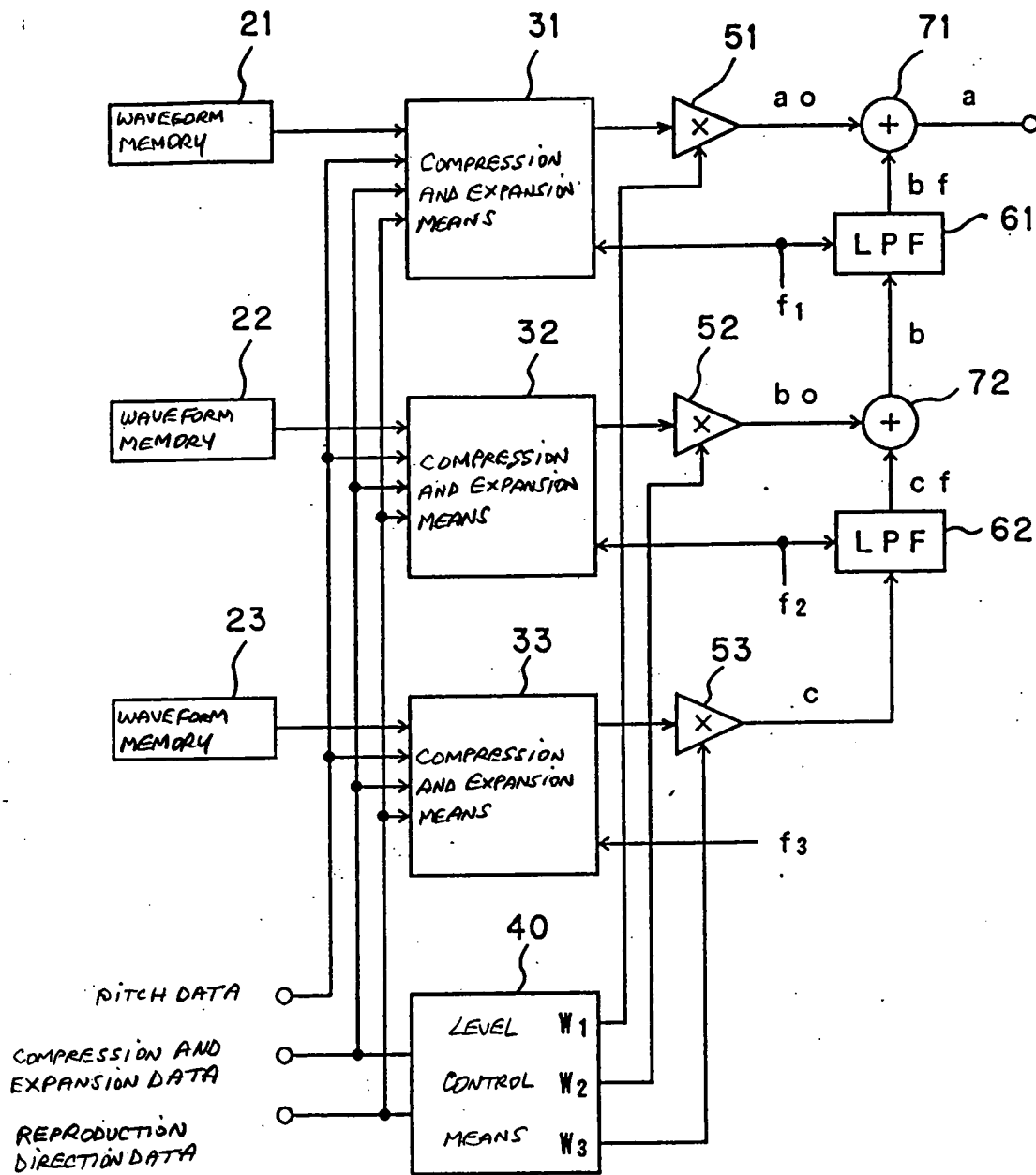


Fig.10

0945665-120999

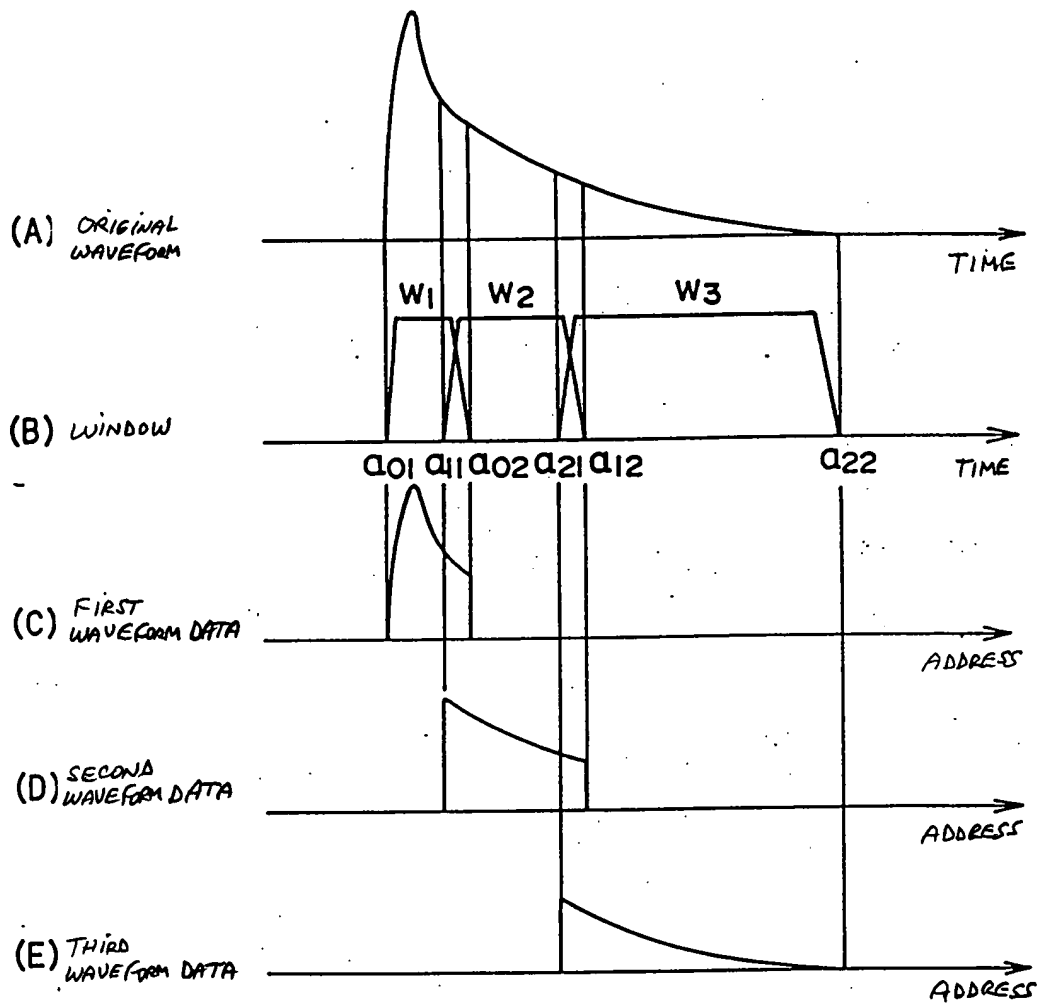


Fig.11

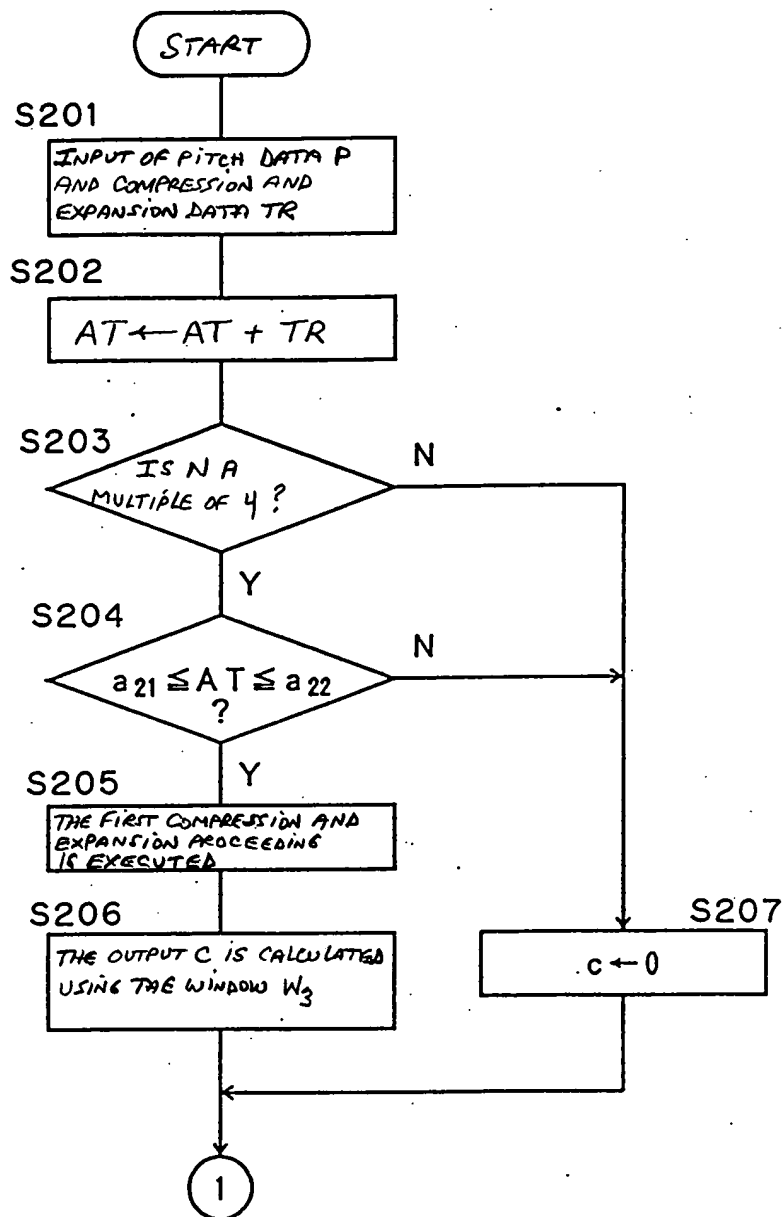


Fig.12

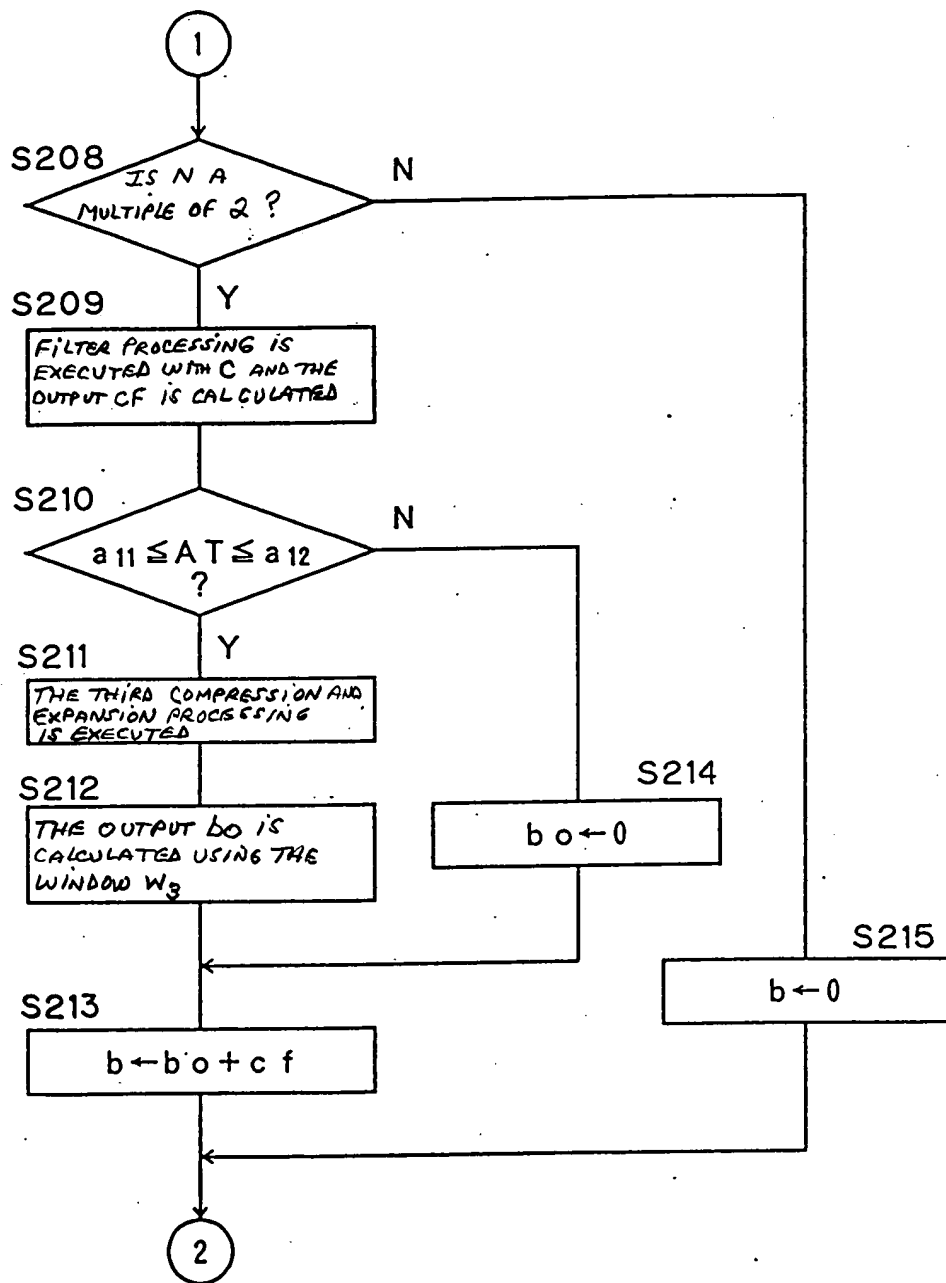


Fig.13

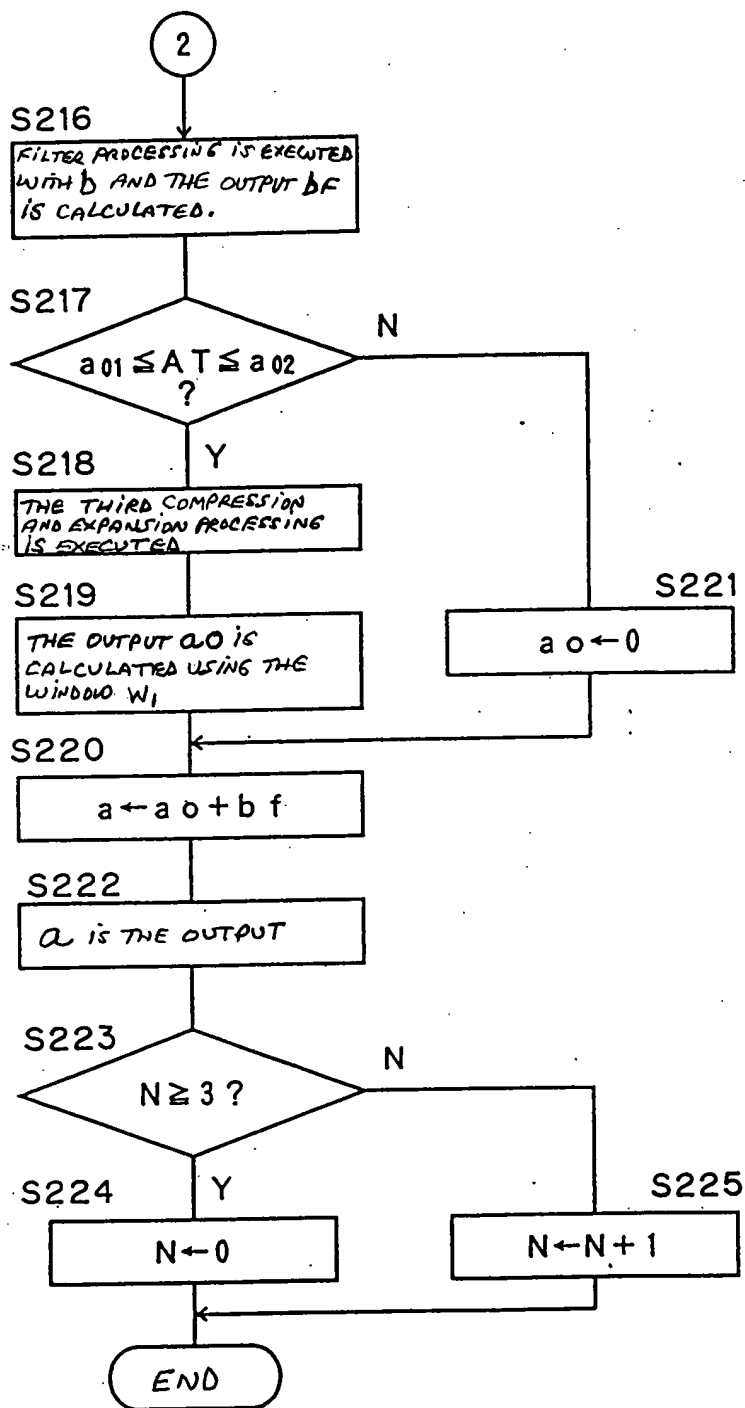


Fig.14